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## ABSTRSCT

The present invention relates to a method for illuminating the viruses in a circulatory blood, comprising the following steps of: 1) Adding an anticoagulant into a whole blood source and establishing a circulation system for the whole blood source; 2) Withdrawing the whole blood with the anticoagulant into a plasma-separating device for a separation, when finished, directly pumping the red-blood cells back into the whole blood source and transporting the plasma into a mixing transport pump after the separation; 3) Meanwhile, pumping a photosensitizer methylene blue into the mixing transport pump so that the methylene blue is mixed with the plasma and pumped together into a plasma container; 4) Using an illumination device to illuminate the plasma in the plasma container for virus illumination, and pumping the virus-illuminated plasma into a removing device for removing off the photosensitizer; 5) The methylene blue being absorbed by the removing device and the plasma illuminated being transfused back into the whole blood system; 6) Repeating the step 2 to the step 5 until the virus content in the whole blood source is reduced by 99.99%. The present invention can process blood in a batch, as a pipeline, and can utilize aseptic and disposable sealed systems isolated from the outside environment for processing. The processed plasma flows back into the whole blood source and can be directly transfused into the human body. Still, the invention may be further used to treat virus-diseases such as Hepatitis B, Hepatitis C, AIDS and etc., and to eliminate the viruses of organ transplantation recipient.